

Claims

That which is claimed is:

1. An antimicrobial additive composition for imparting antimicrobial characteristics to acrylic materials, said additive composition comprising:
2,4,4'-trichloro-2'-hydroxydiphenyl ether; and
orthophenyl phenol.
2. An antimicrobial additive composition according to claim 1 wherein the weight ratio of 2,4,4'-trichloro-2'-hydroxydiphenyl ether to orthophenyl phenol is between 90:10 and 10:90.
3. An antimicrobial additive composition according to claim 2 wherein the weight ratio of 2,4,4'-trichloro-2'-hydroxydiphenyl ether to orthophenyl phenol is between 40:60 and 60:40.
4. An antimicrobial additive composition according to claim 2 further comprising a polymeric carrier.
5. A polymer composition having antimicrobial activity, said composition comprising:
an acrylic polymer material,
2,4,4'-trichloro-2'-hydroxydiphenyl ether; and
orthophenyl phenol.
6. A polymer composition according to claim 5 wherein the combined weight concentration of the 2,4,4'-trichloro-2'-hydroxydiphenyl ether and the orthophenyl phenol in the polymer composition is between about 250 ppm and 50,000 ppm based upon the weight of the polymer.

7. A polymer composition according to claim 6 wherein the weight ratio of 2,4,4'-trichloro-2'-hydroxydiphenyl ether to orthophenyl phenol in the composition is between 90:10 and 10:90.
8. A polymer composition according to claim 7 wherein the weight ratio of 2,4,4'-trichloro-2'-hydroxydiphenyl ether to orthophenyl phenol in the composition is between 60:40 and 40:60.
9. A polymer composition according to claim 6 wherein the 2,4,4'-trichloro-2'-hydroxydiphenyl ether is present between about 1000 ppm and 2500 ppm and the orthophenyl phenol is present between about 1000 ppm and 2500 ppm.
10. A polymer composition according to claim 5 in the form of a cast acrylic polymer.
11. A polymer composition according to claim 5 in the form of an extruded polymer.
12. A polymer composition according to claim 5 in the form of a thermoformable sheet.
13. A polymer composition according to claim 5 in the form of a curable resin composition.
14. A polymer composition according to claim 5 in the form of a surface coating layer supported on a substrate material.
15. A polymer composition according to claim 5 which is in the form of a molded article or a component of a molded article.
16. A polymer composition according to claim 15 wherein said molded article is selected from the group consisting of windshields, skylights, outdoor signs, boat

surfaces, automobile tail lights, display cases, light fixtures, shower stalls, spas, bathroom basins, and counter tops, hot tubs, shelving, decorative laminates and other structural items.

17. A method of manufacturing an antimicrobial acrylic polymer composition comprising the steps of:

combining a quantity of 2,4,4'-trichloro-2'-hydroxydiphenyl ether and orthophenyl phenol with an acrylic polymer material to form an antimicrobial acrylic polymer composition wherein the combined weight concentration of the 2,4,4'-trichloro-2'-hydroxydiphenyl ether and orthophenyl phenol in the polymer composition is between about 250 ppm and about 50,000 ppm based upon the weight of the polymer composition.

18. A method according to claim 17 further comprising the step of forming the antimicrobial acrylic polymer composition into a sheet.

19. A method according to claims 17 or 18 wherein the 2,4,4'-trichloro-2'-hydroxydiphenyl ether is present between about 1000 ppm and 2500 ppm and the orthophenyl phenol is present between about 1000 ppm and 2500 ppm.

20. A method according to claims 17 or 18 wherein the 2,4,4'-trichloro-2'-hydroxydiphenyl ether and the orthophenyl phenol are combined with the acrylic polymer composition by adding both to a precursor of the acrylic polymer composition.

21. A method according to claims 17 or 18 wherein the weight ratio of 2,4,4'-trichloro-2'-hydroxydiphenyl ether to orthophenyl phenol in the polymer composition is between about 90:10 and 10:90.

22. A method according to claims 17 or 18 wherein the weight ratio of 2,4,4'-trichloro-2'-hydroxydiphenyl ether to orthophenyl phenol in the polymer composition is between about 60:40 and 40:60.

24. A method according to claim 18 wherein the step of forming the polymer into an acrylic sheet is selected from the group consisting of casting the syrup and extruding the syrup.

25. A method according to claim 18 further comprising molding the thermoformable acrylic sheet into a product.

26. A method according to claim 25 wherein the product is selected from the group consisting of windshields, skylights, outdoor signs, boat surfaces, automobile tail lights, display cases, light fixtures, shower stalls, spas, bathroom basins, and counter tops, hot tubs, shelving, decorative laminates and other structural items.